

**EPA's Review of the Bad River Band of Lake Superior Tribe of Chippewa Indians
Water Quality Standards under the Clean Water Act, Section 303(c)
WQSTS TR-2011-390**

Date: SEP 21 2011

I. Summary

A. Date Received by EPA: July 21, 2011 with an EPA-requested supplemental certification received on August 5, 2011.

B. Submittal History

On June 26, 2009 the Bad River Band of Lake Superior Tribe of Chippewa Indians (the Band) was granted authorization for a water quality standards (WQS) program consistent with §518 of the Clean Water Act (CWA) and the regulatory requirements at 40 CFR §131.8. The authorization extended to programs administered under §303 and §401 of the CWA. Over the past several years, the Band has worked to develop WQS consistent with CWA §303 and the implementing regulations.

On February 7, 2011, 48 days in advance of the Band's March 28, 2011 public hearing, the Band notified the general public of the upcoming public hearing and opportunity to provide comment via publication in the *Daily Press*, published in Ashland, Wisconsin. In a letter dated July 15, 2011 the Band formally submitted the WQS to the U.S. Environmental Protection Agency (EPA) for review and approval. This record documents EPA's review of those sections of the WQS for which EPA has the authority under CWA §303 to take action.

C. Documents Included in the Submittal and Supplement

- Letter from Tribal Chairman Michael Wiggins, Jr. to Susan Hedman, dated July 15, 2011, transmitting the Band's adopted WQS and supporting documentation for EPA review and approval;
- Bad River Band of Lake Superior Tribe of Chippewa Indians final WQS, dated July 6, 2011;
- Bad River Band of Lake Superior Tribe of Chippewa Indians Resolution 7-6-11 441 (hereafter Resolution 7-6-11 441) approving and adopting the Band's WQS;
- Letter from Erick Arnold, Lead Attorney, to Susan Hedman, dated July 15, 2011 certifying that the Bad River Band of Lake Superior Tribe of Chippewa Indians complied with the provisions of 40 CFR 131.6, the hearing notice, and response requirements of 40 CFR 25, and all other applicable provisions of the CWA during the process to enact the Band's WQS;
- Letter from Erick Arnold, Lead Attorney, to Susan Hedman, dated August 5, 2011 certifying that the Bad River Band of Lake Superior Tribe of Chippewa Indians duly adopted the Band's WQS pursuant to tribal law;
- Printer's affidavit of publication documenting that the WQS public hearing notice, submitted for publication by the Bad River Band of Lake Superior Tribe of Chippewa Indians, was published in the *Daily Press* on February 7, 2011;

- Public notice and request for comments fact sheet, which was made available on February 7, 2011 both in hard copy at the Bad River Band's Natural Resource Department office and electronically, upon request;
- The Band's draft proposed WQS, which were made available on February 7, 2011 both in hard copy at the Bad River Band's Natural Resource Department office and electronically, upon request;
- Comments received by the Band on the Band's proposed WQS;
- Responsiveness summary, including a description of the public notice provided and a summary of the public hearing held on March 28, 2011; and,
- Microsoft Excel spreadsheet documenting the methodology and assumptions used to modify EPA's human health numeric criteria using a subsistence fish consumption rate of 142.4 g/day. EPA requested the details of the Band's calculations and the spreadsheet was provided by email on August 3, 2011.

D. Description of Action

The Band adopted WQS applicable to surface waters within the exterior boundaries of the Bad River Reservation, as described in the Band's application for authorization for a WQS program, and submitted the adopted WQS to EPA for review and approval.

E. Basis of the Band's Action

WQS Program Authorization: The Band was granted authorization for a WQS program on June 26, 2009, consistent with CWA §518 and the regulatory requirements at 40 CFR §131.8.

Adoption of WQS: The Bad River Tribal Council is authorized under tribal law to approve and adopt the Band's WQS. In a Tribal Council meeting held on July 6, 2011 the WQS were duly adopted via Resolution 7-6-11 441.

Public Notice: On February 7, 2011 the Band proposed WQS for public review and comment. In addition, the Band provided public notice of a public hearing scheduled for March 28, 2011 in the *Daily Press*, a local newspaper. The Band made its WQS and related fact sheets available to members of the public, both in hard copy and electronically. In addition, the Band provided hard copies of the proposed WQS and fact sheets via certified mail to the Fond du Lac Band of Lake Superior Chippewa, the Grand Portage Band of Lake Superior Chippewa, the Illinois Environmental Protection Agency, the Indiana Department of Environmental Management, the Michigan Department of Environmental Quality, the Minnesota Pollution Control Agency, the New York State Department of Environmental Conservation, the Ohio Environmental Protection Agency, the Sokaogon Chippewa Community, and the Wisconsin Department of Natural Resources. The Band also shared its proposed WQS with a variety of regional tribes and tribal organizations.

Public Hearing: The Band held its required public hearing at the Bad River Lodge and Casino Convention Center in Odanah, Wisconsin on March 28, 2011.

Responsiveness Summary: During the public review period, the Band received input from ten commenters. The Band developed a responsiveness summary which addresses the comments received. The Band included this document within its WQS submittal.

Certification: The Band certified that its WQS were “duly adopted pursuant to Tribal law” and approved and adopted by the Bad River Tribal Council.

F. Areas Affected

The Band’s WQS apply to all surface waters within the exterior boundaries of the Bad River Reservation. A portion of the Reservation is located on Amnicon Point of Madeline Island.

G. Endangered Species Act (ESA) Coordination

EPA coordinated with the U.S. Fish and Wildlife Service (FWS) office in New Franken, Wisconsin. Two endangered species (Gray Wolf and Piping Plover) and one threatened species (Canada Lynx) are located within the Bad River Reservation. Piping Plover became the only species of concern for the biological evaluation. Designated critical habitat for Piping Plover on Chequamegon Point was also located close to, or potentially overlapping, the Tribal boundaries where the WQS are applicable. EPA determined that approval of the Band’s WQS would have no effect on Gray Wolf and Canada Lynx, is not likely to adversely affect Piping Plover, and will not result in the destruction or adverse modification of Piping Plover designated critical habitat. EPA received FWS concurrence with EPA’s determination on September 20, 2011.

II. CWA §101(a)(2), §303(c)(2), §118(c)(2) and 40 CFR §131 and 40 CFR §132 Review

A. EPA’s Authority Under CWA §303(c)(2)

WQS requirements of CWA §101(a)(2) and §303(c)(2) are implemented through federal regulations contained in 40 CFR §131; WQS requirements of CWA §118, specific to waters of the Great Lakes System, are implemented through federal regulations contained in 40 CFR §132. Federal regulations at 40 CFR §131.21 require EPA to review and approve or disapprove state or tribe adopted WQS. In making this determination, EPA must consider the following requirements of 40 CFR §131.5:

- whether state or tribe adopted uses are consistent with CWA requirements;
- whether the state or tribe has adopted criteria protective of the designated uses;
- whether the state or tribe has followed legal procedures for revising its standards;
- whether state or tribe standards are based on appropriate technical and scientific data and analyses; and
- whether the state’s or tribe’s submission includes certain basic elements as specified in 40 CFR §131.6.

CWA §101(a)(2) specifies that designated uses “provide for the protection and propagation of fish, shellfish, and wildlife and provide for recreation in and on the water.” CWA §303(c)(2) requires that standards shall protect the public health and shall take into consideration their use

and value for public water supplies, propagation of fish and wildlife, recreational, agricultural, industrial, and navigational purposes.

EPA is required to review and approve new and revised WQS submitted by states and tribes. Possible EPA actions include:

- **Approval** (where EPA has concluded that approval of certain revisions will have no effect on listed species, or is otherwise not subject to ESA consultation);
- **Approval subject to ESA consultation** (where EPA has concluded that certain revisions may affect listed species (including beneficial effects));
- **Disapproval** (where EPA has concluded that certain revisions do not meet the requirements of the CWA or federal regulations and guidance), and;
- **No EPA action** (where EPA has concluded that certain revisions are not revisions to the state's or tribe's WQS and therefore do not need to be reviewed under CWA §303(c)).

Consistent with federal regulations at 40 CFR §131.21, new or revised WQS do not become effective for CWA purposes until they are approved by EPA.

B. Comments on the Bad River Band's Draft Water Quality Standards

The Band received comments from the Bad River Watershed Association, EPA, the Fond du Lac Band of Lake Superior Chippewa, Gogebic Taconite, the Great Lakes Indian Fish & Wildlife Commission, Matt Hudson, the Watershed Action Director for the Bad River Watershed Association, the Michigan Department of Environmental Quality, Edith Leoso and Loretta Livingston, members of the Band, and the Wisconsin Department of Natural Resources.

Major comments included the following:

- The process the Band envisions to revise its WQS;
- Whether the Band would allow mixing zones;
- Definitions of terms used in the WQS;
- The Band's antidegradation policy (and implementation and decision-making);
- Dischargers to waters upstream of the Reservation;
- The Band's intent to regulate water flow or water level;
- Numeric criteria for bioaccumulate chemicals of concern (BCCs) that the Band might opt to add to its WQS;
- The degree to which the classification of certain fisheries corresponds across the Wisconsin-Reservation border;
- Clarification of certain general numeric criteria;
- Clarification of the types of fisheries found in certain Tribal waters;
- Clarification surrounding Reservation waterbody names;
- How the Band envisions its WQS will impact off-Reservation activities;
- How enforcement action would be executed;
- Whether the Band's WQS are consistent with the CWA;

- How enforcement action would be executed;
- Whether the Band's WQS are consistent with the CWA;
- Whether the Band adequately identified potentially interested and/or affected parties during its public participation process;
- The technical and scientific data, analyses, and methods that the Band used to develop water quality criteria;
- The Band's ammonia water quality criteria;
- General support for the Band's WQS;
- Assurance that the Band's WQS revision process would be consistent with both the requirements of 40 CFR §25 and those of 40 CFR §131.20;
- Any decision to revise numeric water quality criteria should follow a process consistent with these regulations;
- Clarify the Band's antidegradation policy with respect to Outstanding Resource Waters;
- Make minor adjustments to ensure consistency with numeric criteria prescribed in 40 CFR §132.

EPA reviewed the comments received by the Band and the Band's responses to these comments. Based on this review, EPA concludes that the Band appropriately considered the comments received and responded to commenters and/or revised the Band's proposed WQS as appropriate.

C. EPA's Review of the Band's Final Rules

Table 1. Review of submittal for administrative completeness.

Statutory and regulatory requirements	Bad River Band's rule submittal
Use designations consistent with the provisions of CWA §101(a)(2), CWA§303(c)(2) and 40 CFR §131.6(a)).	Sections F and G, and Table 1 of the WQS include designated uses for all surface waters of the Reservation. These uses provide for the protection and propagation of fish, shellfish, and wildlife, and provide for recreation in and on the water. In addition, these designated uses are consistent with CWA §303(c)(2), in that the water quality required to accommodate the Band's designated uses is at least high as that required to provide for the uses contemplated at this point in the statute.
Methods used and analyses conducted to support WQS revisions. (40 CFR §131.6(b))	The Band provided the Excel spreadsheet used to develop criteria to protect human health from toxic contaminants identified in 40 CFR §132. These criteria were developed using methods from 40 CFR §132 and EPA's subsistence fish consumption rate of 142.4 g/day. Other numeric criteria (acute and chronic aquatic life, wildlife) were taken directly from 40 CFR §132. The Band will modify water quality criteria consistent with EPA's "Water Quality Standards Handbook: Second Edition" and procedures and methods at 40 CFR §132.
Water quality criteria sufficient to protect the designated uses of Tribal surface waters. (40 CFR §131.6(c), 40	Section E.6. of the Band's WQS contains narrative criteria to protect designated uses that are consistent with those in the second edition of EPA's "Water Quality Standards Handbook". Sections E.7. and H of

Statutory and regulatory requirements	Bad River Band's rule submittal
CFR §132)	the WQS contain numeric criteria to protect designated uses. The Band's criteria for acute and chronic aquatic life protection and wildlife protection were taken directly from 40 CFR §132. The Band's human health criteria were developed using methods from 40 CFR §132, but adjusted to account for the Band's diet, which is rich in fish.
An antidegradation policy and implementation, demonstration, and decision procedures consistent with 40 CFR §131.12, 40 CFR §131.6(d), and 40 CFR §132, Appendix E.	Sections E.2 through E.5. of the Band's WQS contain an antidegradation policy and implementation procedures consistent with 40 CFR §131.12 and 40 CFR §132, Appendix E.
Certification by the state/tribe Attorney General or other appropriate legal authority within the state or tribe that the WQS were duly adopted pursuant to state or tribal law. (40 CFR §131.6(e))	The Band's July 21, 2011 submittal includes (1) Resolution 7-6-11 441 which states that the Tribal Council approves and adopts the WQS; (2) attorney certification on August 5, 2011, that the Tribal WQS were adopted pursuant to tribal law and constitute the law of the Band.
General information which will aid EPA in determining the adequacy of the scientific basis of the standards which do not include uses specified in CWA §101(a)(2) as well as information on general policies applicable to state or tribal standards which affect their application and implementation. (40 CFR §131.6(f))	The documentation provided by the Band in support of these WQS and considered by EPA in reviewing this submittal is identified in section I(C), above.

Conclusion: On the basis of the review summarized above, EPA finds the Band's submittal of WQS rules is administratively complete, consistent with the requirements of 40 CFR §131.6.

D. EPA action on the Band's Final Rules

a. Section A – Background: This section includes four numbered items that provide background information supporting the Band's adoption of the standards, the purpose of the Band's WQS, and the relationship between the WQS and other tribal rights.

(1) At A.1, EPA approves the Band's introductory statements.

(2) At A.2., the Band states: "It is the purpose for these Tribal water quality standards to prescribe the minimum water quality requirements for the surface waters located within the exterior boundaries of the Bad River Reservation to ensure compliance with §303(c) of the Clean Water Act (CWA)." This statement is consistent with the CWA, 40 CFR §131.2, and 40 CFR §132.1 and EPA approves this provision.

(3) At A.3., the Band states: "...these Tribal water quality standards shall not be construed to abrogate independent Tribal rights to sufficient quantities and quality of water to support the flora, fauna, and cultural traditions of the Tribe." This provision parallels the requirements of CWA §101(g). EPA approves this provision.

(4) At A.4., the Band states: "It is the further purpose of these Tribal water quality standards to protect public health and welfare, enhance the quality of water, and serve the purposes of the CWA." This statement is consistent with the CWA and 40 CFR §131.2 and EPA approves this provision.

b. Section B – Territory Covered: This section identifies the area where these WQS apply. The Band states: "The provisions for these water quality standards shall apply to all surface waters within the exterior boundaries of the Bad River Reservation. The Band notes that waters upstream of the Bad River Reservation can affect the waters of the Bad River Reservation. It is the Band's intent that these Tribal water quality standards be applied to the fullest extent of the Band's jurisdictional control and to protect the waters of the Bad River Reservation from any impacts regardless of the location of the source of those impacts."

For CWA purposes EPA is approving these standards for the surface waters within the exterior boundaries of the Bad River Reservation that are included in EPA's June 26, 2009 approval to obtain authorization for a WQS program (found at: <http://www.epa.gov/r5water/wqs5/wqstribes.htm>). Application of these WQS by the Band to waters other than those specifically described above is under the Band's own inherent authority and outside of EPA's authority under CWA §303(c) to either approve or disapprove.

c. Section C – Applicability, Administration, and Amendment: This section includes seven numbered items which define the waters subject to these WQS, define the role that the WQS will play in water management decisions, authorize variances from WQS, establish revision procedures for the WQS, note that 40 CFR §131 and 40 CFR §132 shall apply to the Band's WQS, allow mixing zones, and establish the conditions under which the WQS apply.

(1) At C.1., the Band states: "The water quality standards are applicable to the waters within the exterior boundaries of the Bad River Reservation as described in the Tribe's application for water quality standards program authorization as approved by EPA on June 26, 2009, and otherwise to the fullest extent of the Tribe's jurisdictional control." EPA approves this paragraph.

(2) At C.2., the Band states: "These water quality standards shall provide the basis for all water management decisions affecting water quality within the Reservation boundaries, including, but not limited to, point-source permitting, non-point source controls and the physical alterations of water bodies including wetlands." EPA approves this provision. It is consistent with implementation of EPA-approved WQS within other CWA programs (e.g. CWA §401 certifications, §402 NPDES permitting, §319 non-point source program)

(3) At C.3., the Band notes that the Band's Water Resources Program may authorize variances from WQS, consistent with Procedure 2 of 40 CFR §132, Appendix F, on a case-by-case basis. The Band further notes that variances will be subject to approval by the Bad River Tribal Council. EPA approves the variance authorizing provision in section C.3.

(4) At C.4., the Band specifies the WQS will be reviewed once every three years and may be modified during that review, or as the need arises. Furthermore, potential modifications of WQS will be subject to the public participation process, consistent with 40 CFR §131.20(b) and 40 CFR §25. The Band also notes that any change to WQS must first be adopted by the Bad River Tribal Council, certified as complying with tribal law by the Band's legal counsel, and submitted for EPA review and approval. EPA approves section C.4.

(5) At C.5., the Band states: "All other applicable provisions of 40 CFR 131 and 132 shall apply to the Tribe's water quality standards." EPA approves section C.5.

(6) At C.6., the Band states that mixing zones may be allowed on a case-by-case basis. EPA approves this statement allowing mixing zones.

(7) At C.7., the Band provides statements regarding the application of narrative and numeric criteria related to critical flows. Narrative criteria and acute numeric criteria apply regardless of flow. Chronic numeric criteria apply at greater than, or equal to the 7Q10 (the lowest average 7 consecutive day low flow with an average frequency of occurrence once every 10 years), as established using U.S. Geological Survey (USGS) methods. EPA approves section C.7. Flow is not a consideration for the general protection provided through the narrative criteria, and acutely toxic conditions are expected to be avoided by application of the acute criteria, regardless of flow. The 7Q10 critical flow calculated for the chronic criteria is consistent with EPA recommendations in the "Water Quality Standards Handbook: Second Edition," and the USGS methodology is recommended by EPA, as well.

d. Section D – Definitions: The Band notes: "Any term not defined here will have meaning consistent with the definitions in 40 CFR 132." EPA approves this statement, along with each of the definitions provided in Table 2.

Table 2. Band's definitions.

Term	Included in 40 CFR §132.2?	As protective as 40 CFR §132.2?	EPA Review
"Acute-chronic ratio"	Yes	Identical	EPA approves this provision.
"Acute toxicity"	Yes	Identical	EPA approves this provision.

Term	Included in 40 CFR §132.2?	As protective as 40 CFR §132.2?	EPA Review
“Adverse effect”	Yes	Yes	EPA approves this provision.
“Ambient conditions”	No	N/A	EPA approves this provision.
“Background conditions”	No	N/A	EPA approves this provision.
“Bioaccumulative chemical of concern (BCC)”	Yes	Identical	EPA approves this provision.
“Carcinogen”	Yes	Identical	EPA approves this provision.
“Ceremonial and Religious water use”	No	N/A	EPA approves this provision.
“Change in background”	No	N/A	EPA approves this provision.
“Chronic toxicity”	Yes	Yes	EPA approves this provision.
“Council” or “Tribal Council”	No	N/A	EPA approves this provision.
“Criterion continuous concentration (CCC)”	Yes	Yes	“Criterion continuous concentration” is defined in 40 CFR §132 using the term “unacceptable effect.” The Band replaces this term with “adverse effect.” EPA believes that the Band’s definition is intended to be at least as protective as the definition in 40 CFR §132.2 and therefore approves this provision.
“Criterion maximum concentration (CMC)”	Yes	Yes	“Criterion maximum concentration” is defined in 40 CFR §132 using the term “unacceptable effect.” The Band replaces this term with “adverse effect.” EPA believes that the Band’s definition is intended to be at least as protective as the definition in 40 CFR §132.2 and therefore approves this provision.
“Cultural water use”	No	N/A	EPA approves this provision.

Term	Included in 40 CFR §132.2?	As protective as 40 CFR §132.2?	EPA Review
“Designated uses”	No	N/A	“Designated uses” is defined in 40 CFR §131.3; the Band’s definition is identical to the definition therein. EPA approves this provision.
“Endangered or threatened species”	Yes	Identical	EPA approves this provision.
“EPA” or “Agency”	No	N/A	EPA approves this provision.
“Exceptional Resource Waters”	No	N/A	EPA interprets the Band’s “Exceptional Resource Waters” term to be the functional equivalent of “High quality waters,” as defined in Appendix E of 40 CFR §132. EPA approves this provision.
“Existing uses”	No	N/A	“Existing uses” is defined in 40 CFR §131.3; the Band’s definition is identical to the definition therein. EPA approves this provision.
“Human cancer criterion (HCC)”	Yes	Identical	EPA approves this provision.
“Human cancer value (HCV)”	Yes	Yes	The Band substitutes “recreational” for “recreation” in the definition of the term but it is the functional equivalent of the definition in 40 CFR §132.2. EPA approves this provision.
“Human noncancer criterion (HNC)”	Yes	Identical	EPA approves this provision.
“Human noncancer value (HNV)”	Yes	Identical	EPA approves this provision.
“Natural Background Conditions”	No	N/A	EPA approves this provision.
“Natural Biological Community”	No	N/A	EPA approves this provision.
“Non-point Source”	No	N/A	EPA approves this provision.

Term	Included in 40 CFR §132.2?	As protective as 40 CFR §132.2?	EPA Review
“Outstanding Resource Water”	No	N/A	EPA believes this antidegradation protection level to be at least as protective as that required in 40 CFR §131.12 and Appendix E of 40 CFR §132. EPA approves this provision.
“Point Source”	No	N/A	The CWA defines “point source” at §502. The Band’s definition is very similar to that provided at §502, however, the Band adds “landfill leachate collection systems” to the list of examples of “point sources” in the CWA. EPA believes that the Band’s definition is at least as protective as that at §502 and therefore approves the provision.
“Pollution”	No	N/A	“Pollution” is defined in §502 of the CWA; the Band’s definition is functionally identical to definition therein. EPA approves this provision.
“pH”	No	N/A	EPA approves this provision.
“Primary contact recreation”	No	N/A	EPA approves this provision.
“Regional Administrator”	No	N/A	The Band’s use of the term is consistent with its use in 40 CFR §131 and 40 CFR §132. EPA approves this provision.
“Reservation”	No	N/A	EPA approves this provision.
“Ricing”	No	N/A	EPA approves this provision.
“Secondary Contact Recreation”	No	N/A	EPA approves this provision.
“Surface water”	No	N/A	EPA approves this provision.
“Temperature”	No	N/A	EPA approves this provision.
“Toxicity” or “toxic”	No	N/A	EPA approves this provision.
“Tribe”	No	N/A	EPA approves this provision.

Term	Included in 40 CFR §132.2?	As protective as 40 CFR §132.2?	EPA Review
“Turbidity”	No	N/A	EPA approves this provision.
“Water Resources Program”	No	N/A	EPA approves this provision.
“Wetland”	No	N/A	EPA notes that the Band’s current definition of the term is consistent with the joint EPA-U.S. Army Corps of Engineers definition of the term. EPA approves this provision.
“Wildlife Habitat”	No	N/A	EPA approves this provision.

e. Section E – General considerations: This section includes the Band’s antidegradation policy, antidegradation implementation rules, antidegradation demonstration rules, antidegradation decision rules, narrative criteria, numeric criteria for dissolved oxygen, pH, turbidity, and bacteria, procedures for the development of site-specific criteria, and analytical methods to determine compliance with the Band’s WQS.

(1) At E.1., the Band states: “At the boundary between waters of different classifications, the water quality standards for the most sensitive classification shall prevail.” This provision is consistent with 40 CFR §131.11(a)(1) and 40 CFR §131.10(b) and EPA approves it.

(2) Antidegradation standard:

(a) The Band’s antidegradation policy is found at E.2. CWA and regulatory requirements, major components of the Band’s antidegradation policy, and EPA findings are listed below.

EPA regulations at 40 CFR §131.12(a)(1) require that, in all cases, water quality to protect designated and existing uses is protected. Appendix E of 40 CFR §132 further requires that “where designated uses of the waterbody are impaired, there shall be no lowering of the water quality with respect to the pollutant or pollutants which are causing the impairment.” This level of protection is commonly referred to as “Tier 1” protection.

EPA regulations at 40 CFR §131.12(a)(2) require that, in waters where water quality exceeds that necessary to “support propagation of fish, shellfish, and wildlife and recreation in and on the water,” water quality must be protected unless a state or tribe finds, “after full satisfaction of the intergovernmental coordination and public participation provisions of the state’s continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located.” Furthermore, EPA regulations require that, if

degradation is allowed, the state or tribe ensure that water quality remain high enough to continue to support existing uses fully. Last, in high quality waters, states and tribes “shall assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control.” This level of antidegradation protection is referred to as “Tier 2” protection.

EPA regulations at 40 CFR §131.12(a)(3) state: “Where high quality waters constitute an outstanding National resource, such as waters of National and State parks and wildlife refuges and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected.” This level of protection is referred to as “Tier 3” protection.

EPA regulations address discharges where potential water quality impairment associated with a thermal discharge is involved, as well. In these cases, the antidegradation policy and implementing method shall be consistent with CWA §316.

In some cases, states and tribes choose to add a tier of antidegradation protection that combines elements of traditional protection levels into a hybrid tier. The Bad River Band has chosen to incorporate into its WQS a level of antidegradation protection that falls between Tiers 2 and 3. These Tier 2.5 waters are identified as Outstanding Resource Waters (ORW). New or increased discharges to ORW are allowed provided that they do not lead to a change in background conditions or negative impacts to designated or existing uses. The Band has chosen to prohibit new or increased discharges of bioaccumulative chemicals of concern (BCCs) to ORW.

EPA’s checklist, which is used to evaluate whether each of the regulatory requirements have been met within the Band’s policy, is included below to document the determination that all regulatory requirements have been met:

(i) Applicability: Is the antidegradation policy applicable to BCCs only, or to all pollutants? All pollutants.

EPA Review: At section E.3.i., of the Band’s standards, the antidegradation policy is applied to “any pollutant.” There is also a description at E.3.i.e, of what will be considered a “lowering of water quality” including, but not limited to the following: “...deliberate activities that, based on the information available, could be reasonably expected to result in an increased loading of **any pollutant** to any waters of the Bad River Reservation.” The applicability of the Band’s antidegradation policy to all pollutants is consistent with 40 CFR §131.12 and more protective than requirements of 40 CFR §132, Appendix E. EPA approves this provision.

(ii) Does the antidegradation policy offer protection of existing and designated uses (*i.e.* Tier 1 protection)? Yes.

EPA Review: At the end of paragraph E.2., the Band incorporates Tier 1 protection of existing uses by including the statement: “This Antidegradation Policy provides for the maintenance and protection of water quality to ensure that all designated and existing uses are met and maintained.” Also, within section E.2.i., the Band states: “Existing in-stream water uses and the level of water quality fully protective of the existing uses shall be maintained and protected, or improved in the case of a degraded stream. Where designated uses of the water body are impaired, there shall be no lowering of the water quality with respect to the pollutant or pollutants that are causing the impairment.” This provision is consistent with 40 CFR §131.12 and 40 CFR §132 Appendix E. EPA approves this provision.

(iii) Does the antidegradation policy provide for the protection of high quality waters (*i.e.* Tier 2 protection)? Yes.

EPA Review: At E.2.i., the Band classifies some of its waters as Exceptional Resource Waters (ERW), which are the functional equivalent of EPA’s Tier 2 high quality waters. This is the default level of protection for all Tribal waters that are not specifically classified ORW (Tier 2.5) or Outstanding Tribal Resource Waters (OTRW) (Tier 3). The ERW classification allows for lowering of water quality for important social or economic development, but only after full satisfaction of intergovernmental coordination and public participation provisions of the Band’s continuing planning process. This is consistent with 40 CFR §131.12 and 40 CFR §132 Appendix E. EPA approves this portion of the Band’s WQS.

(A) Are high quality waters identified on a parameter-by-parameter basis? No.

EPA Review: Federal regulations at 40 CFR §132 require that at least Tier 2 antidegradation protection be applied to all waters of the Great Lakes basin for any parameter for which the water quality is better than the minimum necessary to support the designated uses as described by the water quality criteria. The purpose of this provision was to preclude states and tribes from identifying individual waters or classes of waters to which Tier 2 antidegradation did not apply. The Band’s antidegradation policy and implementation procedures do not exclude any individual surface waters or classes of waters from application of at least Tier 2 protection. At E.2.i., the Band indicates that all waters not specifically named as subject to Tier 2.5 (ORW) or Tier 3 (OTRW) antidegradation protection are protected as Tier 2 waters (ERW). EPA considers this type of antidegradation classification a “waterbody-by-waterbody approach,” versus the “parameter-by-parameter approach.” The Tier 2, ERW, waterbody-by-waterbody approach is acceptable to EPA. This provision is consistent with 40 CFR §131.12 and 40 CFR §132 Appendix E. EPA approves this provision.

(B) Is water quality protected unless a lowering is necessary to accommodate important social or economic development in the area in which the waterbody is located? Yes.

EPA Review: At E.4.i., the Band requires an antidegradation demonstration for any entity seeking to lower water quality. The entity's materials will be reviewed and an antidegradation decision made prior to any allowance of lowered water quality. This provision is consistent with 40 CFR §131.12 and 40 CFR §132 Appendix E. EPA approves this provision.

(iv) For high quality waters, 40 CFR §131.12 and 40 CFR §132, Appendix E require that the state or tribe assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control. Is this assurance included within the antidegradation policy? No.

EPA Review: This provision in the federal regulations clarifies that antidegradation cannot be used as a means of circumventing otherwise applicable effluent standards for point sources, or reasonable and cost-effective best management practices for nonpoint sources. For point sources, requirements such as these are promulgated by EPA under other CWA authorities than §303(c) and are implemented under section 402 of the CWA, through the NPDES permit program. The Band has not requested and EPA has not delegated NPDES permit authority to the Band. As the NPDES permitting authority on the Reservation, it is EPA's responsibility to ensure that all point sources achieve the highest statutory and regulatory requirements through the application of the Band's WQS and all applicable federal NPDES permit regulations and requirements. The Band's antidegradation implementation procedures prohibit any lowering of water quality without an antidegradation demonstration approved by the Band. The pollution prevention and alternative and enhanced treatment components of the Band's implementation procedures will ensure that all cost-effective and reasonable best management practices are required for any new or increased nonpoint source that is required to submit an antidegradation demonstration. For these reasons, this requirement will be addressed sufficiently, despite not being explicit in the Band's WQS. As the Band gains experience implementing its standards, the Band should evaluate whether an explicit statement in the Band's WQS is needed.

(v) Does the Band's antidegradation policy include protection for Outstanding National Resource Waters, or similar (*i.e.* Tier 3)? Yes.

(A) Does Tier 3 protection specify no permanent lowering of water quality? Yes.

EPA Review: At E.2.iii., the Band describes antidegradation protection for OTRW that is equivalent to the Tier 3 antidegradation protection level. New or

increased discharges are not allowed except on a short-term, temporary basis not to exceed six months. Water quality shall be maintained and protected in all cases, without degradation. This provision is consistent with 40 CFR §131.12 and 40 CFR §132, Appendix E. EPA approves this provision of the Band's WQS.

(vi) Do the Band's WQS include language addressing thermal degradation, consistent with CWA §316? Yes.

EPA Review: This provision is consistent with 40 CFR §131.12(a)(4) and 40 CFR §132, Appendix E (I)(D). EPA approves this provision.

(3) Antidegradation implementation

(a) The Band's antidegradation implementation procedures are found at section E.3. CWA and regulatory requirements, major components of the Band's antidegradation implementation procedures, and EPA findings are listed below. EPA's checklist, which is used to evaluate whether each of the regulatory requirements have been met within the Band's implementation strategy, is included below to document the determination that all regulatory requirements have been met:

(i) Do the Band's WQS include a definition of significant lowering of water quality? No, however, at provision D, the Band incorporates by reference all definitions from 40 CFR §132 not explicitly included among those in the Band's WQS. Additionally, at E.3.i., the Band defines "lowering of water quality," using the definition of "significant lowering of water quality" from 40 CFR §132, but expanded to include discharges of any pollutant, rather than simply BCCs.

(A) Is the Band's antidegradation review triggered by any activity or action that will result in an increased loading of BCCs? Yes, the antidegradation review is triggered by any action that will result in increased loading of any pollutant, including BCCs.

EPA Review: The Band defines "lowering of water quality" at section E.3.i. The Band's definition is nearly identical to EPA's definition of "significant lowering of water quality" from 40 CFR §132, Appendix E (II)(A). However, the Band's definition is expanded to include all pollutants rather than just BCCs and it extends the definition of lowering of water quality to include "the projected or observed diminished chemical, biological, or physical integrity of Reservation surface waters, including changes to water flow or water level." The Band's definition, therefore, is more expansive than EPA's definition and the antidegradation implementation is more stringent than that required by EPA's regulations.

Provision D in the Band's WQS ensures consistency of the definition of "significant lowering of water quality" with 40 CFR §132, Appendix E (II)(A). The Band uses the term "lowering of water quality" throughout its

antidegradation section; this term is more protective than 40 CFR §132, Appendix E (II)(A) in that it contemplates impacts from pollutants beyond BCCs and is consistent with 40 CFR §131.12. EPA approves these portions of the Band's WQS.

Regarding the reference to water level and flow within the definition of "lowering of water quality," EPA generally has no authority under CWA §101(g) to approve WQS that could be "construed to supersede or abrogate rights to quantities of water which have been established by any State." EPA is approving this portion of the definition for CWA purposes only as it relates to the continued maintenance and protection of conditions necessary for attainment of applicable designated/existing uses (*e.g.*, navigation; cultural uses such as ricing; protection of fish, aquatic organisms and wildlife, etc.). Nothing in this approval shall be construed to supersede or abrogate rights to quantities of water which have been established by any state or tribe.

(ii) Do the Band's WQS include implementation strategies for protecting existing uses (Tier 1 protection)? Yes.

(A) May water quality be lowered if uses are not attained (criteria are not met)? No.

EPA Review: In provision E.2.i., the Band states: "Where designated uses of the waterbody are impaired, there shall be no lowering of the water quality with respect to the pollutant or pollutants that are causing the impairment." EPA approves the Band's language to protect existing uses and to prohibit lowered water quality if uses are not attained.

(iii) Do the Band's WQS include information on Tier 2 implementation? Yes.

(A) Do the WQS specify that significant lowering of water quality may not occur without completing an antidegradation review to the satisfaction of the Band? Yes.

(B) For BCCs known or believed to be present in a discharge from a point or nonpoint source, is there a monitoring requirement for BCCs that will be included in the applicable control document? No.

EPA Review: Federal regulations for the Great Lakes at 40 CFR §132, Appendix E, II. D. requires that there may be no action that would result in a lowering of water quality for a BCC without an approved antidegradation demonstration. To implement this requirement, the regulations specify that all control documents for permitted discharges to the Great Lakes must include a monitoring requirement for BCCs known or believed to be present. Federal regulations at 40 CFR §132 include requirements applicable to states' and tribes' WQS and NPDES permitting programs. This monitoring requirement specifies a permit condition

necessary to implement the antidegradation standard. EPA is the NPDES permitting authority for discharges on the Band's Reservation. EPA will ensure appropriate monitoring conditions are included in any NPDES permits EPA issues. As the Band gains experience implementing its standards the Band should evaluate whether an explicit statement on BCC monitoring is needed in the Band's WQS.

(iv) Do the Band's WQS include information on implementing Tier 3 protection? Yes, at E.3.ii.

(A) Do the Band's WQS specify no permanent lowering of water? Yes, at E.3.ii.

EPA Review: The Band has met regulatory requirements by indicating that new or increased discharges or alterations of background conditions are not allowed in OTRW. Only a short-term, temporary lowering of water quality, not to exceed 6 months, is allowed. EPA approves the OTRW implementation information.

(v) Do the Band's WQS provide for exemptions from antidegradation review? Yes.

(A) Is short-term or temporary lowering of water quality allowed? Yes, in OTRW.

EPA Review: The Band's WQS allow discharges to OTRW on a short-term, temporary basis for "maintenance/repair of existing roads, bridges, boat landings, culverts, septic systems, or other similar structures," for "construction of buildings, wells, roads, or other similar structures," for "response actions undertaken to alleviate a release into the environment of hazardous substances, pollutants, or contaminants which may pose an imminent threat and substantial danger to public health or welfare," and for "actions undertaken to restore culturally important species and their habitats." The Band's approach is as protective as 40 CFR §132, Appendix E (II)(F) and EPA approves the exemption.

(B) Exemption allowed for bypasses not prohibited at 40 CFR §122.41(m)? No.

EPA Review: The Band's WQS do not contemplate bypasses. Therefore, the Band's antidegradation implementation procedures are more protective than 40 CFR §132, Appendix E (II)(F) requirements.

(C) Is there an exemption for response actions pursuant to CERCLA undertaken to alleviate an imminent and substantial danger to public health/welfare allowed? Yes.

EPA Review: Per E.4.ii.e. and E.4.iii.e., respectively, response actions pursuant to CERCLA may be allowed in Tier 2, ERW, and Tier 2.5, ORW, provided that the entity seeking to implement treatment actions submits antidegradation demonstration materials to the Band's Water Resources Program. The Tribal Council will ultimately determine whether such actions are permissible.

At section E.e.ii. b., the Band does not specifically reference CERCLA, but provides more flexibility to exempt all "response actions undertaken to alleviate a release into the environment of hazardous substances, pollutants, or contaminants which may pose an imminent and substantial danger to public health or welfare" as one permissible reason for a short-term, temporary discharge to OTRW. This is consistent with regulations at 40 CFR §132, Appendix E (II)(F), which allow exemptions for CERCLA, "or similar Federal, State or Tribal authorities, undertaken to alleviate a release into the environment of hazardous substances, pollutants or contaminants which may pose an imminent and substantial danger to public health or welfare." EPA approves the exemptions for emergency response actions within the ERW, ORW and OTRW antidegradation classifications.

(4) Antidegradation demonstration

(a) The Band's antidegradation demonstration requirements are found at E.4. CWA and regulatory requirements, major components of the Band's antidegradation implementation strategy, and EPA findings are listed below. EPA's checklist, which is used to evaluate whether each of the regulatory requirements have been met within the Band's demonstration approach, is included in the record for EPA's action to document the determination that all regulatory requirements have been met:

(i) Does the Band's antidegradation demonstration require consideration of pollution prevention alternatives? Yes, at E.4.ii.a., E.4.iii.a., and E.4.iv.d.

EPA Review: The Band includes requirements for pollution prevention alternatives similar to those at 40 CFR §132, Appendix E (III)(A), but excludes language seeking "cost-effective" alternatives and techniques. This is interpreted to be more stringent than the federal requirement and is permissible under CWA §510 and 40 CFR §131.4(a). EPA approves the Band's language on pollution prevention alternatives.

(ii) Does the Band's antidegradation demonstration require consideration of alternative or enhanced treatment? Yes.

EPA Review: The Band's WQS include provisions at E.4.ii.b, E.4.iii.b, E.4.iv.e. that are nearly identical to language in EPA regulations at 40 CFR §132, Appendix E (III)(B). However, the Band has included a clause that expands the suite of technologies it will review under its alternative or enhanced treatment analysis, via the underlined language in the following statement:

Identify alternative or enhanced treatment techniques that are available to the entity that would eliminate or substantially reduce the lowering of water quality and their costs relative to the cost of treatment necessary to achieve applicable effluent limitations.

The text contained in regulations at 40 CFR §132, Appendix E requires identification of alternative or enhanced treatment to eliminate the lowering of water quality. The Band's additional text was added at EPA's suggestion to give the Band the ability to require data on alternative or enhanced treatment that would substantially reduce the lowering of water quality, even if the lowering could not be completely eliminated, since the corresponding provision of 40 CFR §132 only requires consideration of alternatives if they will completely eliminate the lowering of water quality. Where technologies do not exist to eliminate the need for lowering of water quality, the Band's WQS require entities proposing new or increased discharges to provide information on technologies that would substantially reduce the lowering of water quality. In this way, the Band's WQS are more protective than required by 40 CFR §132, Appendix E (III)(B). EPA approves the Band's provisions for alternative or enhanced treatment.

(iii) Do the Band's WQS require identification of social or economic development benefits resulting from lowering of water quality in the affected area? Yes, for both Tier 2, ERW, and for Tier 2.5, ORW.

EPA Review: EPA approves the social and economic component of the Band's Tier 2, ERW, implementation requirements.

For the Band's Tier 2.5, ORW, the policy indicates that discharges may be allowed, but there should be no change in ambient background conditions. By conducting a social or economic analysis to support a lowering of water quality in the Tier 2.5, there seemed to be a contradiction with the policy requirements of "no change in background conditions." EPA approves this provision based upon the Band's clarifications provided in the Responsiveness Summary: "It is the Tribe's intention to allow new or increased discharges in Outstanding Resource Waters as long as these discharges do not result in a change in background conditions and as long as the resulting quality of the water is adequate to support the designated uses and existing uses of the specific water body."

EPA also notes that neither 40 CFR §131.12 nor 40 CFR §132 impose any obligation on the Band to adopt a Tier 2.5 into their WQS, and even with the ambiguous wording, the protection is at least as protective as what 40 CFR §131.12 and 40 CFR §132 require for Tier 2 protection, which is the review and approval criterion for this provision.

(iv) Do the Band's WQS include special provisions for remedial actions? Yes.

EPA Review: The Band includes identical remedial action requirements as those outlined at 40 CFR §132, Appendix E (III)(E) for its ERW (at E.4.ii.e.) and ORW (at E.4.iii.e.). EPA approves the remedial action provisions.

(v) Are there any additional provisions? Yes.

EPA Review: One additional requirement – a Water Quality Assessment – is included for the ERW and ORW antidegradation demonstration. The provision is slightly different for each of the two antidegradation protection tiers.

The ERW provision at E.4.ii.d. requires entities proposing a new or increased discharge to “demonstrate that the resulting water quality will be protective of existing uses.” This additional text is consistent with the CWA, 40 CFR §131, and 40 CFR §132.

The ORW provision also contains a requirement for an antidegradation demonstration to potentially lower water quality within the ORW. This demonstration is almost the same as the ERW demonstration requirements. EPA notes that neither 40 CFR §131.12 nor 40 CFR §132 impose any obligation on the Band to adopt a Tier 2.5 protection into their WQS. EPA approves this provision because the ORW, Tier 2.5, demonstration requirements are as protective as what 40 CFR §131.12 and 40 CFR §132 require for Tier 2 protection, which is the review and approval criterion for this provision.

The Band’s antidegradation demonstration requirements for OTRW (at E.4.iv.) include several additional provisions. First, the Tribe requires an Identification of Applicable Category. This provision ensures that an entity proposing a new or increased discharge “demonstrate the discharge will arise entirely from one of the categories listed at (E)(3)(ii)” – namely, maintenance/repair of existing roads, bridges, boat landings, etc., response actions undertaken to alleviate a release into the environment of hazardous substances, etc., and/or actions undertaken to restore culturally important species, etc. This is consistent with 40 CFR §132, Appendix E (I)(C) and (II)(C) and is approved by EPA.

Second, the Band’s antidegradation demonstration for OTRW requires a Short Term, Temporary Assessment. This provision requires that the entity proposing a discharge “demonstrate the discharge will not lower the water quality beyond the short term, temporary criteria (no more than 6 months, and no more than necessary).” This requirement is consistent with 40 CFR §132, Appendix E (II)(C)(2) and is approved by EPA.

Third, the Band’s WQS require that the proponent “identify the project need and demonstrate increased loading is a necessity” via its Showing of Necessity provision. This is as protective as requirements of the 40 CFR §132, Appendix E (II)(C) and (II)(F) and is approved by EPA.

Last, the Band's OTRW Pollution Prevention Alternatives Analysis provision requires that a proponent "identify that no increased loads of BCCs shall be discharged." This provision is consistent with the requirements of 40 CFR §132, Appendix E (II)(C)(1) and is approved by EPA.

(5) Antidegradation decision

(a) The Band's antidegradation decision requirements are found at E.5. CWA and regulatory requirements, major components of the Band's antidegradation implementation strategy, and EPA findings are listed below. EPA's checklist, which is used to evaluate whether each of the regulatory requirements have been met within the Band's decision approach, is summarized below and is included in the record for today's action to document the determination that all regulatory requirements have been met:

(i) Will an antidegradation decision be based on information obtained from the permittee through the demonstration, and also be subject to public participation? Yes.

EPA Review: Per E.4.v., all ERW, ORW, and OTRW antidegradation demonstration materials must be submitted to the Band's Water Resources Specialist. Demonstration materials are required for any entity, the actions of which will result in: "the projected or observed diminished chemical, biological, or physical integrity of Reservation surface waters, including changes to water flow or water level; or, new or increased loading of any pollutant from any regulated existing or new facility, either point source or nonpoint source, for which there is a control document or reviewable action, as a result of any activity...." At E.5.i. and E.5.ii., the Band states "the [antidegradation] decision shall be subject to the public participation requirements of 40 CFR 25." EPA approves the antidegradation decision process.

(6) The Band's WQS include narrative criteria at E.6.

(i) The WQS state: "In addition to the other requirements of these Tribal water quality standards, the below Narrative Criteria apply to all waters of the Bad River Reservation. Failure to meet the below criteria constitutes an enforceable violations [sic] of these Tribal water quality standards, and no discharge that has the potential to create or support a violation of these Narrative Criteria shall be approved."

EPA Review: The Band's decision to apply narrative criteria to all waters at all times is consistent with regulations at 40 CFR §131.11(b)(2). EPA interprets the Band's statement that "no discharge that has the potential to create or support a violation of these Narrative Criteria shall be approved" to mean that the Band will not certify under CWA §401 a permit that does not comply with Tribal WQS. This approach is consistent with CWA §401. EPA approves this statement as it relates to EPA's authorities for CWA purposes. EPA notes the Band has its own inherent authority to directly enforce the Tribal WQS. Nothing in EPA's approval of this provision should be construed as approving any program not already conveyed to the Tribe by EPA's June 26, 2009 approval of the Band's application for authorization of the WQS program.

(ii) At E.6.i., the Band's WQS consist of narrative criteria for aesthetic water quality in all Tribal waters, including wetlands. These criteria include five provisions functionally equivalent to those in EPA's "Water Quality Standards Handbook: Second Edition" guidance document (E.6.i.a. through E.6.i.e.), plus two additional provisions. The first additional provision disallows levels of nutrients or other substances attributable to wastewater discharges or pollutant sources from other than natural background conditions that would stimulate nuisance algal and vegetative growth, and general nuisance conditions. The second provision prevents levels of substances from wastewater discharges or pollutant sources from other than natural background conditions that adversely affect the natural biological community of a waterbody.

EPA Review: The Band's application of its narrative criteria is consistent with the CWA. The narrative criteria for aesthetic water quality are consistent with 40 CFR §131.11(b)(2) and CWA §304(a) guidance. EPA approves the Band's narrative criteria for aesthetic water quality at E.6.i.

(iii) At E.6.ii., the Band's WQS provide general narrative criteria for all waters, including wetlands, except as otherwise noted. These include the following provisions:

Provision	Pollutant	Tribal criterion	Discussion
E.6.ii.a	Unspecified	"Pollutants shall not be present in concentrations that cause or may contribute to an adverse effect to human, plant, animal, or aquatic life, or in quantities that may interfere with the normal propagation, growth and survival of indigenous aquatic biota. For toxic substances lacking published criteria, minimum criteria or values shall be calculated by the Tribe or U.S. EPA consistent with procedures specified at 40 CFR 132, Appendices A, B, C, and D."	The Band's criterion is consistent with CWA §101(a)(3), 40 CFR §131.11(2), and 40 CFR §132.
E.6.ii.b.	Radioactivity	"Levels of radioactivity shall not exceed levels expected in Tribal waters under natural background conditions."	The Band's criterion is consistent with CWA §101(a), §301(f), §303(c)(2), and 40 CFR §131.11.
E.6.ii.c.	Water quantity, unspecified water quality variables,	"Water quantity and quality that may limit the growth and propagation of, or otherwise cause or contribute to an adverse effect to wild rice, wildlife, and other	The Band's criterion is consistent with CWA §101(a), §303(c)(2), and 40 CFR §131.11. EPA's review of the literature around wild rice confirms that sulfate appears to

Provision	Pollutant	Tribal criterion	Discussion
	sulfate	flora and fauna of cultural importance to the Tribe shall be prohibited. This includes, but is not limited to, a requirement that sulfate levels shall not exceed concentrations causing or contributing to any adverse effects in waters, including those with a Wild Rice designated use.”	influence wild rice growth. Nothing in this approval shall be construed to supersede or abrogate rights to quantities of water which have been established by any state or tribe.
E.6.ii.d.	Hydrology and physical characteristics	“Natural hydrological conditions supportive of the natural biological community, including all flora and fauna, and physical characteristics naturally present in the waterbody shall be protected to prevent any adverse effects.”	The Band’s criterion is consistent with CWA §101(a), §303(c)(2), and 40 CFR §131.11.
E.6.ii.e.	Unspecified, water flow, seiche, water level, stage, dissolved oxygen, pH, and temperature	“Pollutants or human-induced changes to waters, the sediments of waters, or area hydrology that results in changes to the natural biological communities and wildlife habitat shall be prohibited. The migration of fish and other aquatic biota normally present shall not be hindered. Natural daily and seasonal fluctuations of flow (including naturally occurring seiche), level, stage, dissolved oxygen, pH, and temperature shall be maintained.	The Band’s provision contemplates regulation of pollutants and changes to aquatic sediment, hydrology, and to waters that impact seiche, water flow, level, and stage. The CWA articulates the ability to regulate the chemical, physical, and biological integrity of waters. To the extent that this provision enables the Band to regulate chemical, physical, and biological integrity of Tribal waters, it is consistent with the CWA. Nothing in this approval shall be construed to supersede or abrogate rights to quantities of water which have been established by any state or tribe.
E.6.ii.f.	Mineral quality	“Existing mineral quality shall not be altered by municipal, industrial and in-stream activities or other waste discharges so as to in any way impair the designated uses for a waterbody.”	EPA interprets the term “mineral quality” to mean water quality vis-à-vis the particular chemical and physical attributes of Tribal waters. The Band’s criterion is consistent with the objectives of the CWA §101(a).
E.6.ii.g.	Temperature	“Temperature – No measurable change (increase or decrease) in temperature from other than natural causes shall be allowed that causes or contributes to an	The Band’s criteria are consistent with 40 CFR §131.11.

Provision	Pollutant	Tribal criterion	Discussion
		adverse effect to the natural biological community. For those waters designated as a Cold Water Fishery, there shall be no measurable increase in temperature from other than natural causes.”	
E.6.ii.h.	Unspecified pollutants	“The presence of pollutants in quantities that result in bioaccumulation in aquatic organisms that may cause or contribute to an adverse effect to consumers of aquatic organisms shall be prohibited.”	The Band’s criterion at E.6.ii.h. is consistent with CWA §101(a)(3), 40 CFR §131.11(2), and 40 CFR §132.

EPA Review: The Band’s application of the general narrative criteria at E.6.ii. is consistent with the CWA. EPA approves provisions E.6.ii., E.6.ii.a., E.6.ii.b., E.6.ii.d., E.6.ii.c, E.6.ii.e, E.6.ii.f., E.6.ii.g., and E.6.ii.h. Nothing in this approval shall be construed to supersede or abrogate rights to quantities of water which have been established by any state or tribe.

(7) At E.7., the Band’s WQS incorporate numeric criteria applicable to all Tribal waters, unless otherwise noted. Pollutants addressed within this section include: dissolved oxygen, pH, turbidity, and *E. coli*. The Band also includes a provision outlining how site-specific criteria will be developed.

At E.7. the Band states: “In addition to the other requirements of these water quality standards, the below Numeric Criteria apply to all waters of the Bad River Reservation. Failure to meet the below criteria constitutes an enforceable violations [sic] of these Tribal water quality standards, and no discharge that has the potential to create or support a violation of these Numeric Criteria shall be approved. These criteria apply to all waters (including wetlands), except as otherwise noted...”

EPA Review: To the extent that wetlands are “waters of the U.S.,” the Band’s decision to apply these numeric criteria at all times and to all waters, including wetlands, is consistent with regulations at 40 CFR §131.11(b)(2). EPA interprets the Tribe’s statement that “no discharge that has the potential to create or support a violation of these Numeric Criteria shall be approved” to mean that the Band will not certify under CWA §401 a permit that does not comply with Tribal WQS. This approach is consistent with CWA §401. EPA approves the Band’s approach to CWA §401 certification. EPA’s approval authority under section 303(c) of the CWA extends to those surface waters within the exterior boundaries of the Reservation that are covered by the CWA. Regarding the enforcement provisions, EPA approves this statement as it relates to EPA’s authorities for CWA purposes. EPA notes the Band may have its own inherent authority to directly enforce the Tribal WQS. Nothing in EPA’s approval of this provision should

construed as approving any program not already conveyed to the Band by EPA's June 26, 2009 approval of the Band's application for authorization of the WQS program.

Provision	Pollutant	Tribal criterion	Discussion
E.7.i	Dissolved oxygen	<p>"Dissolved oxygen – Unless otherwise demonstrated through a use attainability analysis or site-specific criterion that aquatic life cannot be supported, a water body capable of supporting aquatic life shall have a daily minimum dissolved oxygen standard of 5 mg/L in all cases except waters designated as a Cold Water Fishery. For those waters designated as a Cold Water Fishery, the dissolved oxygen shall have a daily minimum of 6 mg/L at any time and 8 mg/L when and where early life stages of cold water fish occur. These criteria will not apply to the Kakagon Sloughs, Bad River Sloughs, and wetlands due to their natural conditions."</p>	<p>This provision is consistent with the CWA, CWA §304(a) guidance and 40 CFR §131.11.</p>
E.7.ii.	pH	<p>"pH – No change is permitted greater than 0.5 units over a period of 24 hours for other than natural causes. The change, upward or downward, shall not result in an adverse affect [sic] on aquatic biota, fish or wildlife."</p>	<p>The Band's criterion differs from EPA's CWA §304(a) pH criteria, which specify a pH range of 5 to 9 for domestic water supply and a range of 6.5 to 9 for aquatic life. The Band does not draw domestic drinking water from surface waters of the Reservation. Therefore, the pH criterion is meant to protect the Band's aquatic life, fisheries, and wildlife designated uses.</p> <p>EPA's 1976 "Red Book" CWA §304(a) guidance for pH criteria is based upon 1969 data from the European Inland Fisheries Advisory Commission (EIFAC) and bioassays on the fathead</p>

Provision	Pollutant	Tribal criterion	Discussion
			<p>minnow, caddisfly, stonefly, dragonfly, and mayfly nymphs. These data suggest that the pH range from 6.5 to 9.0 is “harmless to fish, although the toxicity of other poisons may be affected by changes within this range.” EIFAC and bioassay data do not account for possible impacts on wildlife.</p> <p>The Band includes in its WQS a narrative criterion for the protection of aquatic biota, fish, and wildlife. This is consistent with 40 CFR §131.11(b)(2), which states that, in establishing criteria for aquatic pollutants, states or tribes may “establish narrative criteria or criteria based upon biomonitoring methods where numerical criteria cannot be established or to supplement numerical criteria.”</p>
E.7.iii.	Turbidity	“Turbidity – Shall not exceed 5 NTU over natural background turbidity when the background turbidity is 50 NTU or less, or turbidity shall not increase more than 10 percent when the background turbidity is more than 50 NTU.”	This provision is the functional equivalent of the turbidity criterion promulgated by EPA on behalf of the Colville Confederated Tribes at 40 CFR §131.35(F)(ii)(f).
E.7.iv.	<i>E. coli</i>	“Bacteriological Water Quality Criteria – The geometric mean of not less than 5 samples equally spaced over a 30-day period shall not exceed an <i>E. coli</i> count 126 Colony Forming Units (CFU) per 100 milliliters (mL) for fresh waters. Any single sample shall not exceed an <i>E. coli</i> count of 235 CFU per 100 mL.”	This provision is consistent with CWA §304(a) guidance in EPA’s 1986 “Gold Book.”

EPA Review: EPA approves the Band's numeric criteria regulating dissolved oxygen, pH, turbidity, and *E. coli* at E.7.i., E.7.ii., E.7.iii., and E.7.iv.

At E.7.v., the Band's WQS discuss procedures for revising water quality criteria, to account for new scientific information or site-specific factors. In addition, consistent with 40 CFR §132, Appendix F, Procedure 1(A), the Band states that it will adopt more stringent site-specific criteria where necessary to protect federally-listed endangered or threatened species, and may do so to protect state-listed endangered or threatened species.

Where revision is necessary, the Band will ensure that the revision process is conducted in accordance with Tribal WQS provision C.4.ii., which requires that any modification to WQS comply with public participation requirements at 40 CFR §131.20(b) and 40 CFR §25. In addition, E.7.v. states that any revisions to Tribal WQS will protect existing and designated uses, that criteria will be calculated consistent with 40 CFR §132 and EPA's "Water Quality Standards Handbook: Second Edition," and that the Band will submit new criteria to EPA for review and approval.

EPA Review: Provision E.7.v. is consistent with 40 CFR §131.20 and 40 CFR §132 and EPA approves this provision.

At E.8., the Band's WQS note the analytical methods to be used to evaluate compliance with the WQS. The Band cites the following resources: 40 CFR §136, "Standard Methods for the Examination of Water and Wastewater," and other or superseding methods published and/or approved by EPA.

EPA Review: EPA approves provision E.8.

f. Section F – Designated uses: The Band's WQS include ten designated uses, which are described within Section F. These uses include: cultural, wild rice, wildlife, aquatic life and fish, cold water fishery, cool water fishery, recreational, commercial, navigation, and wetland.

At Section F., the Band's WQS state: "Where there are several designated uses for a waterbody, the applicable standard applied will be the criterion necessary to protect the most sensitive use. At the boundary between surface waters of different designated uses, the water quality criteria necessary to protect the more sensitive use or uses shall apply."

EPA Review: The designated uses included within the Band's WQS are consistent with the CWA, 40 CFR 131 and 40 CFR 132. The statement protecting the most sensitive use is consistent with 40 CFR §131.11 and 40 CFR §131.10(b). EPA approves all of Section F.

g. Section G – Specific classifications: In this section, the Band provides information on which Tribal waters are designated for specific uses.

CWA §101(a)(2) requires that, wherever attainable, waters provide “for the protection and propagation of fish, shellfish, and wildlife and...for recreation in and on the water.” In addition, when designating uses, 40 CFR §131.10(a) specifies that states and tribes must “take into consideration the use and value of water for public water supplies,...agricultural, industrial, and other purposes including navigation.” EPA’s requirements and corresponding Tribal uses are listed below:

CWA designated uses to be considered	Bad River Band’s designated uses
Protection and propagation of fish, shellfish, wildlife	Aquatic life and fish, Cold water fishery, Cool water fishery, Wildlife
Recreation in and on the water	Recreational
Public water supply	considered, but no use adopted
Agricultural, Industrial	Commercial
Navigation	Navigation
	Wetland
	Wild rice
	Cultural

EPA Review: EPA approves Section G of the Band’s WQS. The Band’s WQS designate all waters of the Reservation for the Aquatic Life and Fish, Wildlife, and Recreational (primary and secondary contact) uses and are therefore consistent CWA §101(a)(2).

Per 40 CFR §131.10(a), the Band considered the public water supply, agricultural, industrial, and navigation uses. The Band adopted a commercial use (which provides for water to be used in propagation of fish fry at the Band’s hatchery and/or agricultural projects). The Band also adopted a navigation use. The Band elected not to adopt a public water supply use, since the Band does not currently use surface waters for drinking water supply. EPA notes that the Band’s WQS protect waters with cultural and recreational designated uses using criteria developed assuming water consumption, since ingestion is expected to occur during these uses. Therefore, since each Tribal waterbody is designated for cultural and recreational uses, each Tribal waterbody is provided with a level of protection sufficient to support the public water supply use.

In addition, the Band designates all wetlands with the wetland designated use, and designates the wild rice, cold water fishery, and cool water fishery as appropriate, based on knowledge of Tribal water resources.

h. Section H – Numeric Water Quality Criteria and Methodology

The EPA methodology requirements at 40 CFR §132.5(g)(3), which require states and tribes to adopt methodologies, policies, and procedures as protective as those discussed at 40 CFR §132.4 (aquatic life methodology in appendix A, bioaccumulation factors (BAFs) in appendix B, human health methodology in appendix C, wildlife methodology in appendix D) are addressed by the Band on page 20 of the WQS. The Band adopts by reference “...all of the numeric criteria and methodologies from the Great Lakes Guidance...” except where more protective criteria are specified in the WQS (e.g., the human health criteria). The Band’s WQS include additional statements on page 23 for

use of Great Lakes aquatic life methodology, on page 24 for use of human health methodology, and on page 25 for use of Great Lakes wildlife criteria methodology.

EPA Review: EPA approves these methodology statements.

The Band indicates that if any of the criteria within its WQS are deemed not appropriate, then criteria developed under CWA §304(a) may be used. In the federal regulations at 40 CFR §132, Table 5, EPA identifies the specific pollutants to which the methods contained in the regulations at 40 CFR §132 do not apply. The federal regulations at 40 CFR §132 presume that the methodologies contained in the Great Lakes regulations are applicable to all other pollutants unless a state or tribe demonstrates that application of a methodology to a specific pollutant is not scientifically defensible (40 CFR §132.4(h)). In such instances, the regulation directs states and tribes to “apply an alternative methodology or procedure acceptable under 40 CFR 131 when developing water quality criteria.”

EPA Review: EPA approves this provision of the Band’s WQS consistent with the requirements of 40 CFR §132.4(h).

Comparison of wildlife criteria in Table 8 of the Band’s WQS and EPA wildlife criteria requirements (in µg/L) at 40 CFR §132.3(d):

<u>Parameter</u>	<u>EPA criterion</u>	<u>Band’s criterion</u>
DDT and metabolites	0.000011	0.000011
Mercury (includes methylmercury)	0.0013	0.0013
PCBs (class)	0.00012	0.00012
2,3,7,8-TCDD	0.0000000031	0.0000000031

EPA Review: All wildlife criteria are identical to the requirements in 40 CFR §132. EPA approves the Band’s numeric wildlife criteria.

Comparison of acute aquatic life criteria in Table 2 of the Band’s WQS and EPA acute aquatic life criteria requirements at 40 CFR §132.3(a):

40 CFR §132.3(a) required acute aquatic life criteria that are not pH or hardness dependent:

<u>Parameter</u>	<u>EPA criterion</u>	<u>Band’s criterion</u>
Arsenic	339.8	339.8
Chromium (VI)	16.02	16.02
Cyanide	22	22
Dieldrin	0.24	0.24
Endrin	0.086	0.086
Lindane	0.95	0.95
Mercury (II)	1.694	1.694

Parathion	0.065	0.065
Selenium	19.34 (vacated)	19.34

EPA Review: All aquatic life criteria and conversion factors are identical to the requirements in 40 CFR §132. EPA approves the Band's numeric aquatic life criteria.

Comparison of acute aquatic life criteria in Table 3 of the Band's WQS and EPA acute aquatic life criteria requirements at 40 CFR §132.3(a):

<u>Parameter</u>	<u>m_a</u>	<u>b_a</u>	<u>Band's m_a</u>	<u>Band's b_a</u>
Cadmium	1.128	-3.6867	1.1280	-3.6867
Chromium (III)	0.819	3.7256	0.8190	3.7256
Copper	0.9422	-1.700	0.9422	-1.7000
Nickel	0.846	2.255	0.8460	2.2550
Zinc	0.8473	0.844	0.8473	0.8840
Pentachlorophenol	1.005	-4.869	1.0050	-4.8690

EPA Review: All aquatic life criteria and conversion factors are identical to the requirements in 40 CFR §132. EPA approves the Band's numeric aquatic life criteria.

Comparison of chronic aquatic life criteria in Table 4 of the Band's WQS and EPA chronic aquatic life criteria requirements at 40 CFR §132.3(b):

These criteria are not pH or hardness dependent:

<u>Parameter</u>	<u>EPA criterion</u>	<u>Band's criterion</u>
Arsenic (III)	147.9	147.9
Chromium (VI)	10.98	10.98
Cyanide	5.2	5.2
Dieldrin	0.056	0.056
Endrin	0.036	0.036
Mercury (II)	0.9081	0.9081
Parathion	0.013	0.013
Selenium	5	5

EPA Review: All of the Band's chronic aquatic life criteria and conversion factors are consistent with EPA requirements at 40 CFR §132.3(b) and are approved.

Comparison of chronic aquatic life criteria in Table 5 of the Band's WQS and EPA chronic aquatic life criteria requirements at 40 CFR §132.3(b):

These criteria are based upon hardness or pH:

<u>Parameter</u>	<u>m_c</u>	<u>b_c</u>	<u>Band's m_c</u>	<u>Band's b_c</u>
Cadmium	0.7852	-2.715	0.7852	-2.7150
Chromium (III)	0.819	+0.6848	0.8190	+0.6848
Copper	0.8545	-1.702	0.8545	-1.7020
Nickel	0.846	+0.0584	0.8460	+0.0584
Zinc	0.8473	+0.884	0.8473	+0.8840
Pentachlorophenol	1.005	-5.134	1.0050	-5.1340

EPA Review: All of the Band's chronic aquatic life equation components and conversion factors are consistent with 40 CFR §132.4(b) requirements and are approved.

Comparison of human health cancer criteria (in µg/L) in Table 6 of the Band's WQS and EPA regulatory requirements at 40 CFR §132.3(c):

<u>Parameter</u>	<u>EPA criterion (DW)</u>	<u>Band's criterion (DW)</u>	<u>EPA criterion (NDW)</u>	<u>Band's criterion (NDW)</u>
Benzene	12	9.1	310	37
Chlordane	0.00025	0.000097 (9.7E-05)	0.00025	0.000097 (9.7E-05)
DDT	0.00015	0.000015 (1.5E-05)	0.00015	0.000015 (1.5E-05)

Parameter	EPA criterion (DW)	Band's criterion (DW)	EPA criterion (NDW)	Band's criterion (NDW)
Dieldrin	0.0000065	0.00000068 (6.8E-07)	0.0000065	0.00000068 (6.8E-07)
Hexachlorobenzene	0.00045	0.000048 (4.8E-05)	0.00045	0.000048 (4.8E-05)
Hexachloroethane	5.3	0.69 (6.9E-01)	6.7	0.71 (7.1E-01)
Methylene chloride	47	43	2600	370
PCBs (class)	0.0000067	0.0000027 (2.7E-6)	0.0000067	0.0000027 (2.7E-6)
2,3,7,8-TCDD	0.0000000086	0.00000000091 (9.1 E-10)	0.0000000086	0.00000000091 (9.1 E-10)
Toxaphene	0.000068	0.000071 (7.1E-06)	0.000068	0.000071 (7.1E-06)
Trichloroethylene	29	18	370	41

EPA Review: The Bad River Band has submitted human health cancer criteria values more protective than EPA cancer criteria requirements at 40 CFR §132.3(c) and these are hereby approved. The Band uses a fish consumption rate of 142.4 g/day, which is based upon EPA's national subsistence default rate. The rates are broken down into trophic level 3 fish at 34.176 g/day and trophic level 4 fish (top predators) at 108.224 g/day. The Band has also used a risk level of one additional cancer in 100,000 people, which is identical to the risk level EPA uses to calculate the human health cancer criteria in 40 CFR 132. All calculated values are accurate and consistent with the values the Band has presented above.

Comparison of human health non-cancer criteria (in µg/L) in Table 7 of the Band's WQS and EPA regulatory requirements at 40 CFR §132.3(c):

Parameter	EPA criterion (DW)	Band's criterion (DW)	EPA criterion (NDW)	Band's criterion (NDW)
Benzene	19	15	510	60.8
Chlordane	0.0014	0.000149 (1.49E-04)	0.0014	0.000149 (1.49E-04)
Chlorobenzene	470	53.3	3200	87.3
Cyanides	600	141	48000	1980
DDT	0.002	0.00021 (2.10E-04)	0.002	0.00021 (2.10E-04)
Dieldrin	0.00041	0.0000436 (4.36E-05)	0.00041	0.0000436 (4.36E-05)
2,4-Dimethylphenol	450	319	8700	995
2,4-Dinitrophenol	55	49	2800	380
Hexachlorobenzene	0.046	0.00488 (4.88E-03)	0.046	0.00488 (4.88E-03)
Hexachloroethane	6.0	0.775 (7.75E-01)	7.6	0.797 (7.97E-01)

Parameter	EPA criterion (DW)	Band's criterion (DW)	EPA criterion (NDW)	Band's criterion (NDW)
Lindane	0.47	0.0523 (5.23E-02)	0.50	0.0526 (5.26E-02)
Mercury	0.0018	0.000194 (1.94E-04)	0.0018	0.000194 (1.94E-04)
Methylene chloride	1600	1460 (1.46E+03)	90000	12600
2,3,7,8-TCDD	0.000000067 (6.7E-08)	0.0000000071 (7.10E-09)	0.000000067 (6.7E-08)	0.0000000071 (7.10E-09)
Toluene	5600	741	51000	1400

EPA Review: The Bad River Band has submitted human health non-cancer criteria values more protective than EPA non-cancer criteria requirements at 40 CFR §132.3(c) and these are hereby approved. The Band uses a fish consumption rate of 142.4 g/day which is based upon EPA's national subsistence default rate. The rates are broken down into trophic level 3 fish at 34.176 g/day and trophic level 4 fish (top predators) at 108.224 g/day. All calculated values are accurate and consistent with the values the Band has presented above.

At provision H.10., the Band includes its ammonia criteria. Since they offer additional protection to ammonia-sensitive organisms, the Band has opted to incorporate EPA's 2009 draft ammonia criteria, rather than the Agency's final 1999 criteria. Given that the Agency is in the process of finalizing its newest ammonia criteria recommendations, the Band specifies that "when the final [ammonia] criteria are published in the Federal Register, they will immediately take effect in the WQS and shall apply to all waters with an Aquatic Life and Fish (A) designated use."

EPA Review: The Band's ammonia criteria reflect the most current science and EPA's final recommended criteria will apply once they are finalized. EPA approves this provision of the Band's WQS.

i. Section I - Mixing Zones

The Band includes a general statement that mixing zones will be allowed on a case-by-case basis as long as they will not result in objectionable or damaging conditions. The Band also specifies that the methodology for determining the characteristics of a mixing zone shall be consistent with "...the procedures and guidelines in EPA's Water Quality Standards Handbook and the Technical Support Document for Water Quality Based Toxics Control and subsequent updates of the handbook and technical support documents."

EPA Review: The Band's WQS include the following requirements for mixing zones:

- Mixing zones for BCCs are not allowed
- Mixing zones are not allowed in OTRW (Tier 3) waters
- Thermal mixing zones are not allowed in waters designated as Cold Water Fishery

- Where endangered or threatened species may be affected, or their habitat, mixing zones are not allowed
- Where threatened critical resource areas exist, mixing zones are not allowed
- The size of a mixing zone shall be limited to as small an area as practicable
- The size of a mixing zone shall conform to the time exposure responses of aquatic life
- Mixing zones for two or more sources shall not overlap
- Passages for mobile aquatic life shall be maintained within mixing zones
- Spawning, nursery areas, and migratory routes are protected within mixing zones
- The mixing zones shall be free of acutely toxic conditions to aquatic life, objectionable deposits, floating debris, oil, scum, or other materials causing a nuisance, objectionable color, odor, taste, or turbidity and undesirable aquatic life or other nuisance species
- A mixing zone shall not interfere with designated and existing uses of the receiving water or downstream surface waters
- Mixing zones shall not result in significant human health risks
- Water quality standards shall be met at every point outside of a mixing zone

These requirements are as protective as those specified at 40 CFR §132, Appendix F, Procedure 3(D), (E)(4) and (5), and (F). The Band's mixing zone standards do not address all aspects of the mixing zone demonstration requirements at 40 CFR §132, Appendix F, Procedure 3(F) because some aspects apply to either the applicant for a mixing zone or to the permitting authority. As the permitting authority for discharges within the exterior boundaries of the Reservation, EPA is responsible for implementing the Band's mixing zone provisions and ensuring any applicant for a mixing zone complies with the mixing zone demonstration requirements at 40 CFR §132, Appendix F, Procedure 3(F).

j. Section J – Severability

The following paragraph is included at the end of the Band's WQS:

If any provision or subprovision of these Tribal water quality standards or amendments thereto, or the application of any such provision to any person or circumstance is held to be invalid, the remainder of such provisions and subprovisions shall not be affected in any way by such finding.

EPA Review: EPA approves Section J.